

AMENDMENTS TO THE CLAIMS:

1-44. (Cancelled)

45. (Currently Amended) An isolated nucleic acid of HIV-2 ~~having~~ comprising at least a portion of the nucleic acid sequence of a *pol* gene as set forth in Figure 6, wherein the isolated nucleic acid hybridizes with the complement of the nucleic acid sequence of a *pol* gene as set forth in Figure 6 in a hybridization solution comprising 50% formamide, 5X SSC, 5X Denhardt solution, 10% dextran sulfate, and 100µg/ml denatured salmon sperm DNA for 16 hours at 42°C with 2 washes for 30 minutes in a solution of 0.1X SSC and 0.1% SDS.

46. (Currently Amended) A nucleic acid of HIV-2 as claimed in claim 45, wherein said nucleotide sequence is a sequence that also hybridizes with the complement of at least one domain in a *pol* gene of HIV-1_{BRU} in a hybridization solution comprising 25% ~~50%~~ formamide, 5X SSC, 5X Denhardt solution, ~~10% dextran sulfate,~~ and 100µg/ml denatured salmon sperm DNA for 16 hours at 37°C ~~42°C~~ with 2 washes ~~or 30 minutes~~ in a solution of 2X ~~0.1X~~ SSC and 0.1% SDS at 25°C and 1X SSC and 0.1% SDS at 60°C.

47. (Currently Amended) A method for producing a polypeptide of HIV-2 having the amino acid sequence, ~~which is~~ encoded by the nucleic acid sequence of claim 45, comprising providing a transformed host containing a DNA coding for the polypeptide and expressing the polypeptide.

48. (New) The nucleic acid of claim 45, wherein the nucleic acid comprises positions 2658-4936 as set forth in Figure 6.

49. (New) The nucleic acid of claim 46, wherein the nucleic acid comprises positions 2658-4936 as set forth in Figure 6.

50. (New) The nucleic acid of claim 45, wherein the nucleic acid comprises positions 1829-2658 as set forth in Figure 6.

51. (New) The nucleic acid of claim 46, wherein the nucleic acid comprises positions 1829-2658 as set forth in Figure 6.

52. (New) The method of claim 47, wherein the nucleic acid comprises positions 2658-4936 as set forth in Figure 6.

53. (New) The method of claim 47, wherein the nucleic acid comprises positions 1829-2658 as set forth in Figure 6.